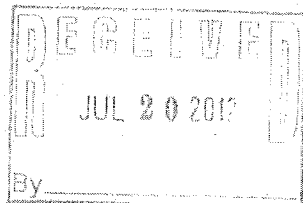


Appalachian Power
PO Box 1986
Charleston, WV 25327

Charles Patton
President and COO



July 18, 2012

Rob Alsop
Office of the Governor
1900 Kanawha Boulevard East
Charleston, WV 25305

Dear Mr. Alsop:

Friday evening, June 29, an enormous wind and rain storm traveled across West Virginia and on into Virginia. The storm was part of a massive "super derecho" or straight-line wind storm that traveled close to 700 miles in 10 hours, devastating 10 states and leaving more than 4 million homes and businesses without electricity. It was as devastating as a hurricane in its destructive force, but came with little advance warning.

More than likely you, your business, your customers or your constituents lost power. In Appalachian Power's service area, a record 573,000 customers were left out of service – nearly 60 percent of the company's total customers. In West Virginia, 330,000, or about two-thirds of the company's customers, were without service.

We know how difficult it was to be without electricity for such an extended period, and during prolonged record heat, no less. The hardship you faced in the wake of this disaster was with us constantly as we worked to restore service as quickly as possible.

We brought in workers from 22 states to assist in the recovery work, bringing the total workers restoring power to nearly 5,200. The storm caused extensive damage to both our distribution and transmission systems. More than 90 distribution substations were taken out of service by the storm, as well as more than 100 transmission lines. More than 1,500 poles across Appalachian's territory had to be replaced, and thousands of spans of wire were damaged.

While 95 percent of our customers were restored within nine days, some customers remained out longer. Appalachian prioritizes power restoration work by first assessing damage, restoring power to critical infrastructure such as hospitals, water and waste water systems, and removing hazards. We then prioritize outages to repair larger outages that will bring back the most customers first, and work through all remaining outages in that manner. We completed all restoration in West Virginia on July 15.

This disaster presented us with several unusual challenges:

- With most major storms, from hurricanes to winter storms, we are able to predict the storm well in advance, allowing us to call in additional workers from other companies and stage them in areas most likely to be affected. This storm was not predicted by the National Weather Service nor any of the national or local meteorologists we rely on, so we had no advance resources in place.

- Most storms leave damage in concentrated areas. The super derecho caused significant damage across most of our West Virginia service area, and indeed, across most of the state.
- Because there were several million people throughout the country without power, many of the resources on which Appalachian would normally depend were occupied with restoring power in their own areas. Moreover, we were competing with other companies for resources.
- Additional storms in our service territory hampered restoration efforts and caused more outages. Four major storms on July 1, July 3, July 5 and July 8 added 105,000 new outages.
- The continuing extreme heat was a challenge for our crews, just as it was for those without power. For example, in some cases we had double tree trimming crews so that work could continue while crews alternated half an hour of work and half an hour of rest.
- Housing was a significant challenge throughout the restoration effort. In addition to using virtually all hotel space within and near our service territory, W.Va. State University, Marshall University, University of Charleston and Concord University all provided dormitory rooms. Brushfork, Welch and Eleanor armories provided housing space. Linens and/or cots had to be provided for the schools and armories.
- Communication with other companies working for us was not always smooth because most did not have GPS and data communication technologies that interfaced with our systems. This challenged our ability to provide customers with timely and accurate information on the restoration status of specific outages.

In the aftermath of the storm, there will be reviews on many levels of the disaster and Appalachian's response to it. We welcome these reviews. We hope to learn from them, as well as share what we have learned during the restoration process. For example, after the December 2009 storm we greatly enhanced our communications with emergency management organizations and city, county and state officials. As a result, communications with these groups was very effective throughout the crisis.

There were many remarkable aspects of this storm and of our recovery effort, but perhaps the most memorable for those of us at Appalachian Power was the response of our customers. Yes, customers were frustrated, hot and tired of having no electricity. But by far most people recognized and were supportive of the work we were doing and had nothing but kind words for our crews. On behalf of all of us at Appalachian Power, we sincerely thank you for your patience and support.

Sincerely,



Note: if you'd like to see some interesting photos and videos we captured during storm restoration, go to www.AppalachianPower.com.

Shelton, Janet

m: adbragg@aep.com
sent: Thursday, August 02, 2012 12:27 PM
To: Markham, Peter G; Shelton, Janet
Cc: Gianato, Jimmy J; Hoyer, James A MG MIL NG WV ARNG; Alsop, Rob; pawright@aep.com; medempsey@aep.com
Subject: Governor Tomblin's After Action Review
Attachments: After Action Review Questionnaire - Appalachian Power Company.pdf

Peter:

Thank you for the opportunity to participate in Governor Tomblin's After Action Review of the June 29, 2012 super derecho. Attached you will find the After Action Review Questionnaire prepared by Appalachian Power Company (APCo). Our responses are based upon observations of a number of individuals directly involved in leading storm restoration efforts, as well as, open and inclusive storm debrief sessions held at APCo service centers with employees performing storm restoration functions.

We believe we have provided the information requested, however, if you have questions or need additional information, please let me know.

Sincerely,

an D. Bragg
Manager, Customer Services
Appalachian Power Company
Charleston, WV
office: (304) 348-4156
cell: (304) 546-7865

AFTER ACTION REVIEW QUESTIONNAIRE

Company: Appalachian Power Company (APCo)

Project/Event: Emergency response to storm-related state of emergency due to 6/29/2012 super derecho wind storm

Prepared by:
Philip A. Wright and Alan D. Bragg

Date of Review:
August 2, 2012

In responding to the following questions, please use additional sheets as necessary.

Key Participants:

NAME	JOB TITLE	ROLE IN EMERGENCY
Philip A. Wright	Vice President – Distribution	General overall direction
Alan D. Bragg	Manager – Customer Services	Emergency management and customer communication
F. Scott Chambers	Manager – Region Support	Overall storm restoration coordination

Please provide a detailed summary of your company's role in responding to the state of emergency.

Friday evening, June 29, an enormous wind and rain storm traveled across West Virginia and on into Virginia. The storm was part of a massive "super derecho" or straight-line wind storm that traveled close to 700 miles in 10 hours, devastating 10 states and leaving more than 4 million homes and businesses without electricity. It was as devastating as a hurricane in its destructive force, but came with little advance warning. In Appalachian Power's service area, a record 573,000 customers were left out of service – nearly 60 percent of the company's total customers. In West Virginia, 330,000, or about two-thirds of the company's customers, were without service.

APCo brought in workers from 22 states to assist in restoring electric service, bringing the total workers restoring power to nearly 5,200. The storm caused extensive damage to both our distribution and transmission systems. More than 90 of our distribution substations were taken out of service by the storm, as well as more than 100 transmission lines. More than 1,500 poles across Appalachian's territory had to be replaced, and thousands of spans of wire were damaged.

While 95 percent of our customers were restored within nine days, some customers remained out longer. Appalachian prioritizes power restoration work by first assessing damage, restoring power to critical infrastructure such as hospitals, water and waste water systems, and removing hazards. We then prioritize outages to repair larger outages that will bring back the most customers first, and work through all remaining outages in that manner. We completed all restoration in West Virginia on July 15.

This disaster presented APCo with several unusual challenges:

- With most major storms, from hurricanes to winter storms, we are able to predict the storm well in advance, allowing us to call in additional workers from other companies and stage them in areas most likely to be affected. This storm was not predicted by the National Weather Service nor any of the national or local meteorologists we rely on, so we had no advance resources in place.
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- Because there were several million people throughout the country without power, many of the resources on which APCo would normally depend were occupied with restoring power in their own areas. Moreover, we were competing with other companies for resources.
- Additional storms in our service territory hampered restoration efforts and caused more outages. Four major storms on July 1, July 3, July 5 and July 8 added 105,000 new outages.
- The continuing extreme heat was a challenge for our crews, just as it was for those without power. For example, in some cases we had double tree trimming crews so that work could continue while crews alternated half an hour of work and half an hour of rest.
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- Communication with other companies working for us was not always smooth because most did not have GPS and data communication technologies that interfaced with our systems. This challenged our ability to provide customers with timely and accurate information on the restoration status of specific outages.

What went well and why?

(What were the successful steps taken towards achieving your objective?)

SUCCESSSES	HOW TO ENSURE SUCCESS IN THE FUTURE
Improved communication with emergency management and other stakeholders.	Continue Emergency Management Agency (EMA) Coordinator function and relationship building with emergency management personnel. We recently distributed a survey, which asks the recipients to critique our Storm Communication e-mails.
Improved access to and use of state and local resources to aid in recovery, such as housing, road clearing, helicopters and traffic control (flagging and/or police presence).	Continue to develop the EMA Coordinator function, and relationship building with emergency management, WV Department of Homeland Security, WV Division of Highways, WV National Guard and local cities and counties.

Improved coordination with local governments to aid in road clearing efforts when trees and wire were down, entangled and blocking roads.	APCo did work with some local governments to coordinate efforts with local city or county street department crews to de-energize, ground and make work locations safe from electrical hazards so those crews could clear and open roads. We suspect additional discussion on this issue is needed with both internal as well as external stakeholders to determine the appropriate priority of this work in the service restoration process.
Increased use of social media proved valuable during this storm restoration.	Continue using social media, like Facebook, Twitter and APCo website to provide information, pictures and videos to customers.
Increased utilization of non-traditional company resources during restoration. Using lessons learned from the December 2009 snow storm, APCo now utilizes the services of many individuals who generally do not perform physical distribution wires activities as a part of their normal duties, including personnel from Building Services, Regulatory, Customer Services, office personnel, etc. During this storm, we even used power plant personnel in storm roles.	Provide major storm training and assign storm jobs to employees from local power plants and other departments within APCo's footprint who have not historically functioned in storm recovery roles.
APCo's major storm restoration skills have grown tremendously since the December 2009 snow storm. This is evidenced by the faster rate of recovery from this storm and the fact that we were much more successful in effectively and efficiently managing the huge number of outside resources called in to aid in restoration.	Continue learning and improving from each subsequent storm.
The Transmission - Distribution Coordinator position was very effective during this event. With over 100 transmission lines out of service and 90 substations de-energized, it was clear that we had to evaluate and assess each line. This Coordinator worked with the Transmission Dispatch Center, the Distribution Dispatch Center, Transmission Line, and Customer Services to prioritize restoration of transmission lines and communicated with those involved in the restoration effort so they would know when specific substations would be energized.	Enhance an existing Transmission Line Outage System to allow transmission line outages to be prioritized and made readily available to employees involved in the restoration effort.

Helicopters were used for assessing not only transmission line damage, but more were used for distribution assessment during this storm. We also used the aerial saw to clear heavily damaged rights-of-way, which accelerated the restoration effort in those areas. Further, we used those same helicopters to help to set distribution poles in very remote areas.	Expand the role of the Distribution Helicopter Coordinator to develop relationships and contracts with helicopter flight services in the area we would have more access to helicopters during a restoration event.
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What can be improved and how?

(What could have been done better? What can your company do differently in similar situation in the future to ensure success? What would be your advice to future emergency response teams?)

WHAT CAN BE IMPROVED	RECOMMENDATIONS
Long range weather forecasting for this type of event	Examine forecasting techniques and available technologies to determine availability and feasibility of improved forecasts.
Scale of this storm was unprecedented and posed problems for some internal systems	Use the experience from this storm to upgrade affected systems. For example, AEP's outage management system was moved, during storm recovery, to another, more robust server.
Vegetation management	The super derecho created sustained winds of approximately 77 miles per hour and resulted in severe tree damage and uprooting, causing trees to fall from outside of company's rights-of-way into our facilities. We are convinced that a cycle management program would not have significantly impacted the number of outages resulting from the storm. However, we do believe that such a program could enhance restoration efforts, particularly in our rural areas. APCo will work with stakeholders to support the implementation of such a program.
Commercial customer generator connections (APCo was called upon to de-energize and ground service to some commercial customers following restoration of electrical service to allow generators to be disconnected)	Develop a policy, handout or code that details the proper method to connect a generator, and perhaps even define types of generator connections that should be permanently installed at certain facilities.
Due to the scale of this storm, information on individual outages, such as, outage cause or expected restoration time, were not as readily available as usual.	Work through this issue internally to devise a method through which information gathered and work performed by contractors can be entered into internal outage management systems in a more expedient manner.

Our Service Restoration Plan (SRP) provides the structure and rigor for most restoration events that we have faced. We are currently evaluating the Plan to make it more scalable for a variety of storm sizes. This event was unprecedented in APCo's history and the largest restoration effort we have experienced to date, so we had many challenges with management of resources and logistics.	We are in the process of conducting local storm debriefs along with a Company leadership storm debrief in the next few weeks. Along with this we will be evaluating each storm position in our SRP and identifying additional internal and external employees to fill those roles so we will have adequate leadership and field workers to respond to a similar or larger event in the future.
Coordination of crews used for traffic control (flagging) and work area protection was difficult due to the number and multiple locations.	A Work Area Protection Coordinator has been established in our Service Restoration Plan and this position will coordinate all activities for these crews and dispatch them to areas to ensure we have adequate safety measures in place while crews are working along roadways.
A number of APCo retired employees were used to assist as Assessors, Crew Guides and other roles. However, the process to hire them through Manpower or other temporary employment service is tedious and time consuming.	Develop a database of retirees that would help during major storms and have them prescreened for employment so they only have to be activated when needed. Further we have established a Retiree Support Coordinator that will manage this database and enlist workers regularly then make the contacts during restoration events.
Logistics, especially lodging, was a critical issue during this event due to a large convention in the Charleston area and the Greenbrier Classic impacting hotel availability throughout the areas affected by the storms.	We are developing a list of "non-traditional" facilities that could house crews like colleges and universities, the National Mine Academy, church camps, local schools, etc. We will build a database of these locations along with capacities and contact information that we could access earlier in the event to insure we have adequate housing for incoming crews.